

CLAIMS

1. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence represented by SEQ ID NO: 2, its partial peptide or a salt thereof.
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2. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 1.
- 10 3. A polynucleotide comprising a base sequence which is complementary to the polynucleotide according to claim 2 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.
- 15 4. An antibody for the protein, its partial peptide or a salt thereof according to claim 1.
5. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence represented by SEQ ID NO: 4, its partial peptide or a salt thereof.
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6. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 5.
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7. A polynucleotide comprising a base sequence which is complementary to the polynucleotide according to claim 6 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.
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8. An antibody for the protein, its partial peptide or a salt thereof according to claim 5.
9. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence
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represented by SEQ ID NO: 6, its partial peptide or a salt thereof.

10. A polynucleotide comprising a base sequence encoding the
5 protein or its partial peptide according to claim 9.

11. A polynucleotide comprising a base sequence which is
complementary to the polynucleotide according to claim 10 or
an initial transcription product generating the polynucleotide
10 as a result of processing, or a part thereof.

12. An antibody for the protein, its partial peptide or a salt
thereof according to claim 9.

15 13. A protein comprising an amino acid sequence which is the
same or substantially the same as the amino acid sequence
represented by SEQ ID NO: 8, its partial peptide or a salt
thereof.

20 14. A polynucleotide comprising a base sequence encoding the
protein or its partial peptide according to claim 13.

15. A polynucleotide comprising a base sequence which is
complementary to the polynucleotide according to claim 14 or
25 an initial transcription product generating the polynucleotide
as a result of processing, or a part thereof.

16. An antibody for the protein, its partial peptide or a salt
thereof according to claim 13.

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17. A protein comprising an amino acid sequence which is the
same or substantially the same as the amino acid sequence
represented by SEQ ID NO: 10, its partial peptide or a salt
thereof.

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18. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 17.

19. A polynucleotide comprising a base sequence which is
5 complementary to the polynucleotide according to claim 18 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.

20. An antibody for the protein, its partial peptide or a salt
10 thereof according to claim 17.

21. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence represented by SEQ ID NO: 12, its partial peptide or a salt
15 thereof.

22. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 21.

20 23. A polynucleotide comprising a base sequence which is complementary to the polynucleotide according to claim 22 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.

25 24. An antibody for the protein, its partial peptide or a salt thereof according to claim 21.

25. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence
30 represented by SEQ ID NO: 14, its partial peptide or a salt thereof.

26. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 25.

27. A polynucleotide comprising a base sequence which is complementary to the polynucleotide according to claim 26 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.

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28. An antibody for the protein, its partial peptide or a salt thereof according to claim 25.

29. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence represented by SEQ ID NO: 16, its partial peptide or a salt thereof.

30. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 29.

31. A polynucleotide comprising a base sequence which is complementary to the polynucleotide according to claim 30 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.

32. An antibody for the protein, its partial peptide or a salt thereof according to claim 29.

33. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence represented by SEQ ID NO: 18, its partial peptide or a salt thereof.

34. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 33.

35. A polynucleotide comprising a base sequence which is complementary to the polynucleotide according to claim 34 or an initial transcription product generating the polynucleotide

as a result of processing, or a part thereof.

36. An antibody for the protein, its partial peptide or a salt thereof according to claim 33.

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37. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence represented by SEQ ID NO: 20, its partial peptide or a salt thereof.

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38. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 37.

39. A polynucleotide comprising a base sequence which is
15 complementary to the polynucleotide according to claim 38 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.

40. An antibody for the protein, its partial peptide or a salt
20 thereof according to claim 37.

41. A protein comprising an amino acid sequence which is the same or substantially the same as the amino acid sequence represented by SEQ ID NO: 22, its partial peptide or a salt
25 thereof.

42. A polynucleotide comprising a base sequence encoding the protein or its partial peptide according to claim 41.

30 43. A polynucleotide comprising a base sequence which is complementary to the polynucleotide according to claim 42 or an initial transcription product generating the polynucleotide as a result of processing, or a part thereof.

35 44. An antibody for the protein, its partial peptide or a salt

thereof according to claim 41.

45. A medicine comprising the protein, its partial peptide or a salt thereof according to any one of claims 1, 5, 9, 13, 17,
5 21, 25, 29, 33, 37 and 41.

46. A medicine comprising the polynucleotide according to any one of claims 2, 6, 10, 14, 18, 22, 26, 30, 34, 38 and 42.

10 47. A medicine comprising the polynucleotide according to any one of claims 3, 7, 11, 15, 19, 23, 27, 31, 35, 39 and 43.

48. A medicine comprising the antibody according to any one of claims 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 and 44.

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49. The medicine according to any one of claims 45 to 48, which is a prophylactic and/or therapeutic agent for diseases involving abnormality of adipocyte differentiation and/or metabolism function.

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50. A diagnostic agent comprising the polynucleotide according to any one of claims 2, 6, 10, 14, 18, 22, 26, 30, 34, 38 and 42 or a part thereof.

25 51. A diagnostic agent comprising the polynucleotide according to any one of claims 3, 7, 11, 15, 19, 23, 27, 31, 35, 39 and 43.

52. A diagnostic agent comprising the antibody according to
30 any one of claims 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 and 44.

53. A diagnostic agent according to any one of claims 50 to 52 for diagnosing diseases involving abnormality of adipocyte differentiation and/or metabolism function.

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54. A method of screening a compound or a salt thereof having specific affinity for the protein or a salt thereof according to any one of claims 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41, or a compound or a salt thereof changing binding property
5 between the protein or a salt thereof and the compound or a salt thereof, which comprises using said protein, its partial peptide or a salt thereof.

55. A kit for screening a compound or a salt thereof having
10 specific affinity for the protein or a salt thereof according to any one of claims 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41, or a compound or a salt thereof changing binding property between the protein or a salt thereof and the compound or a salt thereof, which comprises said protein, its partial
15 peptide or a salt thereof.

56. A medicine comprising a compound or a salt thereof obtained by using the method according to claim 54 or the kit according to claim 55.

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57. The medicine according to claim 56, which is a prophylactic and/or therapeutic agent for diseases involving abnormality of adipocyte differentiation and/or metabolism function.

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58. A method of screening a compound or a salt thereof changing the expression amount of a gene encoding the protein according to any one of claims 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41, which comprises using the polynucleotide according
30 to any one of claims 2, 6, 10, 14, 18, 22, 26, 30, 34, 38 and 42 or a part thereof.

59. A kit for screening a compound or a salt thereof changing the expression amount of gene encoding the protein as
35 described in any one 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and

41, which comprises the polynucleotide according to any one of claims 2, 6, 10, 14, 18, 22, 26, 30, 34, 38 and 42 or a part thereof.

5 60. A medicine comprising a compound or a salt thereof obtained by using the method according to claim 58 or the kit according to claim 59.

61. The medicine according to claim 60, which is a
10 prophylactic and/or therapeutic agent for diseases involving abnormality of adipocyte differentiation and/or metabolism function.

62. A method of screening a compound or a salt thereof
15 changing the amount of the protein or a salt thereof according to any one of claims 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41 on the cell membrane or in the extracellular fluid, which comprises using the antibody according to any one of claims 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 and 44.

20 63. A kit for screening a compound or a salt thereof changing the amount of the protein or a salt thereof according to any one of claims 1, 5, 9, 13, 17, 21, 25, 29, 33, 37 and 41 on the cell membrane or in the extracellular fluid, which
25 comprises the antibody according to any one of claims 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 and 44.

64. A medicine comprising a compound or a salt thereof obtained by using the method according to claim 62 or the kit
30 according to claim 63.

65. The medicine according to claim 64, which is a prophylactic and/or therapeutic agent for diseases involving abnormality of adipocyte differentiation and/or metabolism
35 function.